CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

WDR ORDER NO. 96-080

UPDATED WASTE DISCHARGE REQUIREMENTS FOR:

BOCCI SCHNEIDER INTERESTS,
JUNIPERO SERRA CLASS III SOLID WASTE DISPOSAL SITE,
COLMA, SAN MATEO COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter called the Board), finds that:

1. Bocci Schneider Interests is the current owner and operator of a closed municipal solid waste disposal site referred to as the Junipero Serra Solid Waste Disposal Site. Presently, Bocci Schneider Interests carries out post closure/maintenance and land use activities and is hereinafter referred to as the discharger.

PURPOSE OF ORDER UPDATE:

2. The primary purposes of this Order are:

   (1) to update Waste Discharge Requirements to account for site closure and present/future land use;

   (2) to update the site's groundwater monitoring program.

SITE DESCRIPTION:

3. The closed Junipero Serra Disposal Site is located at the intersection of Colma Boulevard and Junipero Serra Boulevard in Colma, California, as shown on Figure 1 which is incorporated in and made part of this order. The property is bounded by Junipero Serra Boulevard to the west, Colma Boulevard to the north, Greenlawn Memorial Park to the east, and Serra Center shopping park to the south.

4. The site consists of a 9.3 acre parcel of which 8 acres were used for solid waste operations. Natural topography of the site has been extensively altered by

previous quarrying operations to provide earth-fill for development of Serramonte Shopping Center and subsequent waste disposal activities conducted at the site since 1956.

5. Permits or orders pertinent to the closed Junipero Serra Disposal Site are:

Waste Discharge Requirments Order 81-09 adopted by the Board on February 18, 1981.

Permit to Operate No. 32122 issued by the Bay Area Air Quality Management District, issued October 24, 1988.

Solid Waste Facility Permit No. 41-AA-007 adopted by the Integrated Waste Management Board on January 15, 1982.

SITE DISPOSAL HISTORY:

6. The site was used for the disposal of municipal refuse starting in 1956 under the direction of AMLOC Companies, Inc. Before 1956, the natural topography of the site had been extensively altered by quarrying operations. Refuse was placed using the area method of disposal. The landfill has accepted household and commercial waste, and construction debris. It did not accept special or hazardous wastes. About 450,000 tons of waste and debris was disposed of at the site. The rate of waste disposal at the site was approximately 30 tons on a daily basis and delivered to the site by the general public. The refuse consists of organic debris, paper, wood, sheet metal, cast iron, and plastic mixed with various amounts of soil. The solid wastes were generally compacted each day. The working face was covered with soil at least once per week in accordance with then-existing permit requirements. The types and relative quantities of wastes received by the site are estimated below:

Household Rubbish	60%
Commercial Wastes	10%
Demolition	20%
Landscaping Wastes	10%

7. No special wastes such as liquids, sludges, slurries,

food wastes, manure, dead animals, household garbage, or hazardous material were allowed or accepted for disposal.

SITE OPERATION AND CLOSURE HISTORY:

8. The closed Junipero Serra Disposal Site does not have a liner or leachate collection and removal system and was generally constructed by the area fill method. Refuse fill was placed in lifts from 5 to 15 feet thick with perimeter slopes of about 3:1 (horizontal to vertical) or flatter.

9. The Junipero Serra Disposal Site ceased operation in July 1983. The Board approved the Site Closure Plan in 1982. The compacted wastes were left in place and were capped with a low-permeability clay cover. In general, the final cover consists of the following three layers:

    # a 1-foot-thick foundation layer of sandy clay (CH), silty sand (SM), sand (SP),

    # a 1-foot-thick layer of clayey soil (SC/SM) or (CL),

    # a 1- to 2 feet-thick layer of topsoil consisting of sand (SP), organic silt (OH), or silty sand (SP).

10. In addition to the soil cover, an oil-sealed rock surface layer was placed on the northern 75% of the site in 1987. The final cover has not exhibited any cracking or settlement since it was installed.

11. In general, the closure work included final cover installation, drainage system installation, access road construction, Colma Boulevard improvements, installation of a landfill gas collection system, and regrading of the landfill surface with clean soil fill.

12. The landfill cover was completed pursuant to the requirements of Waste Discharge Order No. 81-09 and the 1982 Closure Plan. The final cover construction was performed by AMLOC Companies, Inc., the landfill operator. Resources Engineering and Management, REM (formerly of South San Francisco) provided construction

observations of the final cover installation from 1981 through 1984. James A. Wyse Inc. certified that the closure was completed in compliance with the closure plan.

13. In 1987 and 1988, a landfill gas collection and flare system was installed in the refuse to mitigate gas migrating offsite. It consists of 9 vertical gas wells, a landfill gas flare, and 15 gas monitoring probes that are located around the perimeter of the landfill. Since operation of the landfill gas system began, gas has been almost nonexistant as measured by gas probes (James A. Wyse, Inc., 1989).

14. The land use of the former Junipero Serra Disposal Site has been changed. This closed site is currently being considered for development of one-story office/commercial complex to be called the Metro Bay Center. A Home Depot retail store has been constructed at the site. The project consisted of construction of a new 113,000-square-foot, one-story pile supported Home Depot retail store, a separate one-story pile supported parking garage, a pile-supported driveway around the perimeter of the store, and a pile supported entryway. Appurtenant asphaltic concrete traffic and parking areas and underground utilities were also constructed. Approximately 710 Steel H-piles, including 15 indicator piles, were driven during the summer of 1993 for support of the store, parking garage, perimeter driveway, and entryway in accordance with established pile driving criteria approved by Regional Board staff. Revisions to the cap, including sealing around piles and gas collection related to buildings was approved by California Integrated Waste Management Board.

REGIONAL GEOLOGY AND SEISMICITY:

15. The property lies on the southwestern edge of a small structural basin bounded on the southwest by the Santa Cruz Mountain range and on the northeast by San Bruno Mountain. The basin is underlain by interlayered sedimentary sands, silts and clay of Merced and Colma Formations. The Merced formation is exposed in the site vicinity and dips to the north east at angles of 25 to 70 degrees respectively. The Colma formation has been

observed to dip approximately 10 degrees to the northeast.

16. The Colma formation, which underlies the landfill and outcrops on the western portion of the property, is Pleisocene in age and consists of approximately 200 feet of well-sorted, fine- to medium-grained sand with lenses of gravel, sandy silt and clay. Undisturbed soil samples taken from depths of 25 feet to 125 feet in an on-site boring by Cooper & Clark in 1975 exhibited permeability ranging from $1X10^{-5}$ to $1X10^{-6}$ cm/sec.

17. Since most of the Holocene alluvial material was quarried from the site, the Quaternary Colma Formation is essentially the uppermost geologic unit beneath the refuse and artificial fill. The Colma Formation is on the order of 300 feet thick in this area and consists of horizontally bedded, unconsolidated very fine- to medium-grained marine and dune sands. Regionally, the Pliocene Merced Formation underlaying the Colma Formation is up to 5,000 ft thick and mainly consists of poorly indurated sandstone, siltstone and claystone, with beds dipping toward the northeast. Since the Colma-Merced contact outcrops in the site vicinity, the Quaternary Colma Formation may be very thin in this area and may have been completely removed during pre-landfill quarrying. Therefore, the Merced Formation may underlay the fill beneath all or part of the site.

SEISMIC:

18. The main topographic features of the structural basin in which the site is located are mountain ranges and valleys which are structurally controlled by faulting. The active San Andreas fault system traverses the west edge of the basin and is located approximately 1.5 miles southwest of the site. The active Hayward fault lies approximately 17.5 miles to the northeast. The San Bruno-Hillside fault zone is approximately 1 mile northeast of the site; however, based on historical and geologic data, this fault zone is considered to be seismically inactive. The regional effect of ground motion resulting from earthquakes is a primary consideration in the evaluation of slope stability at the site. A stability analysis has been made by Associated Geotechnical Engineers, Inc. (AGE), under contract to EMCON Associates, and concluded that the existing disposal site slopes along the south and east perimeters are stable under static conditions and

marginally stable under seismic-induced dynamic-loading conditions. The AGE analysis recommended that the existing and future slopes be flattened to, or constructed at, a maximum inclination of 2:1 (horizontal to vertical) and the thickness of stockpiled topsoil be reduced to 5 feet.

SITE SETTLEMENT:

19. Site settlement has been investigated by EMCON Associates. The settlement estimates for this site were based on measurements of 16 settlement monuments monitored for 28 months. Maximum settlements over a 40-year period are estimated to be about 3.5 feet at the point of maximum refuse fill thickness, 3.09 feet at the hinge slab and less than 1 foot in the areas of shallowest refuse fill.

GROUNDWATER HYDROGEOLOGY:

20. The shallowest major aquifer in the site vicinity is the Daly City Aquifer, which extends from Lake Merced in southwestern San Francisco to the Merced Valley, about nine miles to the southeast. This shallow water-bearing zone is about 1.5 to 2.5 miles wide. A 1972 regional groundwater study indicated that the water level in the Daly City Aquifer was about 20 feet above Mean Sea Level (MSL) beneath the site in 1971. The study also suggested that groundwater gradient in the disposal site vicinity is northeastward.

21. The static groundwater table was about 133 ft below grade in well GW-1 in 1975, and dropped to below the 150 ft well depth between 1975 and 1982. EGI (Einarson Geoscience, Inc.) estimated that groundwater in the Daly City Aquifer would be encountered at about 330 feet below grade during the June 1990 drilling. On October 22, 1990, static groundwater was about 336 ft below grade in well GW-1.

22. In July 1991, Applied Consultants (AC) completed a groundwater investigation of the Daly City Aquifer for the City of Daly City. According to this report, the Daly City Aquifer is composed of a shallower unconfined water-bearing zone separated from a deeper, confined water-bearing zone by a leaky confined bed.

23. Based on data collected for an aquifer test in the Merced Valley, the AC report suggested that water levels of the Daly City Aquifer near the Junipero Serra Landfill were approximately 120 feet below MSL in August 1988, and flowed northeastward with a gradient of about 0.004 ft/ft. According to the AC study, The Merced Formation sediments within the Daly City Aquifer have a transmissivity of about 15,000 to 25,000 gallon/day/foot, and a storage coefficient of about 0.0003 to 0.0005.

24. Groundwater elevation data and geologic logs from the site wells suggest that a hydrogeologic barrier exists between well MW-3 and wells MW-1 and MW-2. This interpretation is consistent with previously reported subsurface conditions, which suggest the Daly City Aquifer consists of an upper, unconfined water-bearing zone and a lower, confined water-zone. Wells MW-1 and MW-2 probably intersect the upper, unconfined water-bearing zone, and well MW-3 probably intersects the lower water-bearing zone.

SURFACE WATER:

25. The disposal site is located on the southwest edge of a structural basin between two mountain ranges. The natural drainage pattern has been disrupted in several areas of the basin by developments such as Junipero Serra Boulevard, Highway 280, Serramonte Shopping Center and the Junipero Serra disposal site.

BENEFICIAL USES:

26. The Regional Board adopted a revised Water Quality Plan for the San Francisco Bay Basin (Basin Plan) on June 21, 1995. This updated and consolidated plan represents the Board's master water quality control planning document. The revised Basin Plan was approved by the State Water Resource Control Board and the Office of the Administrative Law on July 20 and November 13, respectively, of 1995. A summary of regulatory provisions is contained in Title 23 of the California Code of Regulations at Section 3912. The Basin Plan defines beneficial use and water quality objectives for waters of the State, including surface waters and groundwaters.

The beneficial uses of groundwater in the vicinity of the landfill are:

a. Landscape irrigation
b. Domestic use.

MONITORING PROGRAM:

27. An existing network of 3 deep groundwater monitoring wells (MW-1 MW-2, MW-3) monitor the site's groundwater quality. The site does not have a leachate or vadose zone monitoring system.

28. This landfill was formerly classified as a Class II-2 facility, and pursuant to the 1984 revision of Chapter 15 was reclassified as a Class III facility. The dischargers submitted a Solid Waste Assessment Test (SWAT) Report in February 20, 1992. The hydrogeological and chemical analytic data collected for this investigation suggests that the past landfilling activities at the closed Junipero Serra Disposal Site have not presently impacted groundwater beneath the site.

CALIFORNIA ENVIRONMENTAL QUALITY ACT:

29. This action is exempt from the provisions of the California Environmental Quality Act pursuant to Section 15308, Title 14 of the California Code of Regulations.

30. Sanitary landfills could potentially impact groundwater if not properly designed maintained and/or operated. Groundwater can also be affected by water that percolates through waste materials and extracts or dissolves substances from it and carries them into the groundwater.

31. No solid waste has been disposed of at this site since its closure to public in 1983. The site is considered closed.

32. The Board has notified the dischargers and interested agencies and persons of its intent to prescribe updated waste discharge requirements for the discharge, and has provided them with an opportunity to submit their written views and recommendations.

33. The Board in a public meeting heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the dischargers, their agents, successors and assigns shall meet the applicable provisions contained in Division 3, Title 23, Chapter 15 of the California Code of Regulations, and Division 7 of California Water Code, and shall comply with the following:

A. PROHIBITIONS:

1. Wastes shall not be in contact with ponded water.

2. Leachate from wastes and ponded water containing leachate or in contact with refuse shall not be discharged to waters of the State or of the United States.

3. The site is regulated as an inactive closed facility. Therefore, no additional wastes of any origin or type shall be allowed to be deposited or stored within or upon this site.

4. The dischargers, or any future owner or operator of this site, shall not cause the following conditions to exist in waters of the State at any place outside the waste management facility:

a. Surface Waters

1. Floating, suspended, or deposited macroscopic particulate matter or foam.

2. Bottom deposits or aquatic growth.

3. Adversely alter temperature, turbidity, or apparent color beyond natural background levels.

4. Visible, floating, suspended or deposited oil or other products of petroleum origin.

b. Groundwater

The groundwater shall not be degraded as a result of the waste maintained at the

facility.

B. SPECIFICATIONS:

1. All reports pursuant to this Order shall be prepared under the supervision of a registered civil engineer, California registered geologist or certified engineering geologist.

2. The site shall be protected from any washout or erosion of wastes from inundation which could occur as a result of a 100-year 24-hour precipitation event, or as the result of flooding with a return frequency of 100 years.

3. The dischargers shall assure that the foundation of the site, the refuse fill, and the structures which control leachate, surface drainage, erosion and gas for this site are constructed and maintained to withstand conditions generated during the maximum probable earthquake.

4. The dischargers shall maintain and monitor the waste unit so as not to cause a statistically significant difference to exist between water quality parameters at the compliance point and Water Quality Protection Standards as defined in Section 2550.2 of Article 5. The point of compliance as per Section 2550.5, Article 5 of Chapter 15 is a vertical surface located at the hydraulically downgradient limit of the waste management unit that extends through the uppermost aquifer underlying the unit.

5. In the event of a release of a constituent of concern beyond the Point of Compliance, the site will begin a Compliance Period pursuant to Section 2550.6(a) of Chapter 15. During the Compliance Period, the dischargers shall perform an Evaluation Monitoring Program and a Corrective Action Program.

6. The dischargers shall install any reasonable additional groundwater and leachate monitoring devices required to fulfill the terms of any Discharge Monitoring Program issued by the Executive Officer.

7. Methane and other landfill gases shall be adequately monitored in the developed (Home Depot Complex) and

undeveloped portions of the landfill. If the monitoring devices indicate methane gas build up, the dischargers are then required to vent and remove (extract) the generated gas from the landfill units, to control and minimize the danger of explosion, adverse health effects, nuisance conditions, or the impairment of beneficial uses of water due to migration.

8. The dischargers shall maintain all devices or designed features, installed in accordance with this Order, such that they continue to operate as intended without interruption as provided for by the performance standards adopted by the California Integrated Waste Management Board.

9. The dischargers shall provide and maintain a minimum of two permanent surveyed monuments near the landfill from which the location and elevation of wastes, containment structures, and monitoring facilities can be determined throughout the post-closure and maintenance periods. These monuments shall be installed by a licensed land surveyor or registered civil engineer.

C. PROVISIONS:

1. The dischargers shall comply with all Prohibitions, Specifications, and Provisions of this Order, immediately upon adoption of this Order and as provided below.

2. The reports pursuant to these Provisions shall be prepared under the supervision of a registered civil engineer, registered geologist, or California certified engineering geologist.

3. The dischargers shall submit a detailed Post Earthquake Inspection and Corrective Action Plan acceptable to the Executive Officer to be implemented in the event of any earthquake generating ground shaking of Richter Magnitude 7 or greater at or within 30 miles of the landfill. The report shall describe the containment features, and ground water monitoring and leachate control facilities potentially impacted by the static and seismic deformations of the landfill. The plan shall provide for reporting results of the post earthquake inspection to the Board within 72 hours of the occurrence of the earthquake. Immediately after an earthquake event causing damage to the landfill structures, the corrective action plan shall be

implemented and this Board shall be notified of any damage.

NOTIFICATION:	IMMEDIATELY
REPORT DUE DATE:	WITHIN THREE MONTHS OF ADOPTION OF THIS ORDER

4. The dischargers shall comply with the Self Monitoring Program which is attached to and made part of this order and/or any amendments thereafter.

5. The dischargers shall immediately notify the Board of any flooding, equipment failure, slope failure, or other change in site conditions which could impair the integrity of waste or leachate containment facilities or precipitation and drainage control structures.

NOTIFICATION:	IMMEDIATELY
REPORT DUE DATE:	WITHIN 7 DAYS AFTER THE INCIDENT

6. In the event of settlement which threatens to allow ponding of water or exposure of waste, the dischargers shall reconstruct the settled portions of the landfill's cap.

7. In the event of release of leachate from the waste unit into the environment, the dischargers shall develop and implement a leachate management plan. This plan must include detailed information regarding leachate collection, recovery, treatment and disposal system. The implementation of this plan shall prevent leachate migration offsite.

NOTIFICATION:	IMMEDIATELY
REPORT DUE DATE:	WITHIN 60 DAYS FROM EVENT

8. The Regional Board shall be notified immediately of any failure occurring in the waste management unit. Any failure which threatens the integrity of containment feature or the landfill shall be promptly corrected after approval of the method and schedule by the

Executive Officer.

NOTIFICATION: IMMEDIATELY

REPORT DUE DATE: WITHIN 7 DAYS AFTER THE INCIDENT

9. The dischargers shall maintain a copy of this Order at its office with the environmental compliance staff who are responsible for related operation of this site.

10. This Board considers the property owners and site operators to have continuing responsibility for correcting any problems which arise in the future as a result of this waste discharge or related operations during the post-closure maintenance period.

11. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Dischargers, the Dischargers shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office. To assume operation of this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. (Refer to Standard Provisions referenced above). The request must contain the requesting entity's full legal name, the address and telephone number of the persons responsible for contract with the Board and a statement. The statement shall comply with the signatory paragraph described in Standard Provisions and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code.

12. The dischargers shall permit the Board or its authorized representative, upon presentation of credentials:

    a. Immediate entry upon the premises on which wastes are located or in which any required records are kept.

    b. Access to copy any records required to be kept under the terms and conditions of this Order.

    c. Inspection of any treatment equipment, monitoring equipment, or monitoring method required by this

Order or by any other California State Agency.

d. Sampling of any discharge or ground water governed by this Order.

13. This Order rescinds WDR Order No. 81-09

14. These requirements do not authorize commission of any act causing injury to the property of another or of the public; do not convey any property rights; do not remove liability under federal, state or local laws; and do not authorize the discharge of wastes without appropriate permits from other agencies or organizations.

15. This Order is subject to Board review and updating, as necessary, to comply with changing State or Federal laws, regulations, policies, or guidelines; changes in the Board's Basin Plan; or changes in the discharge characteristics.

16. Copies of all correspondence, reports, and documents pertaining to compliance with the Prohibitions, Specifications and Provisions of this Order, shall also be provided to the Environmental Health Services Division of San Mateo Country.

I, Loretta K. Barsamian Executive Officer, do hereby certify that the foregoing is a full, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on June 19,1996.

Lauren P. Kelly
for
Loretta K. Barsamian
Executive Officer

Attachments:
A. Figure 1: Site Location Map
B. Discharge Monitoring Program

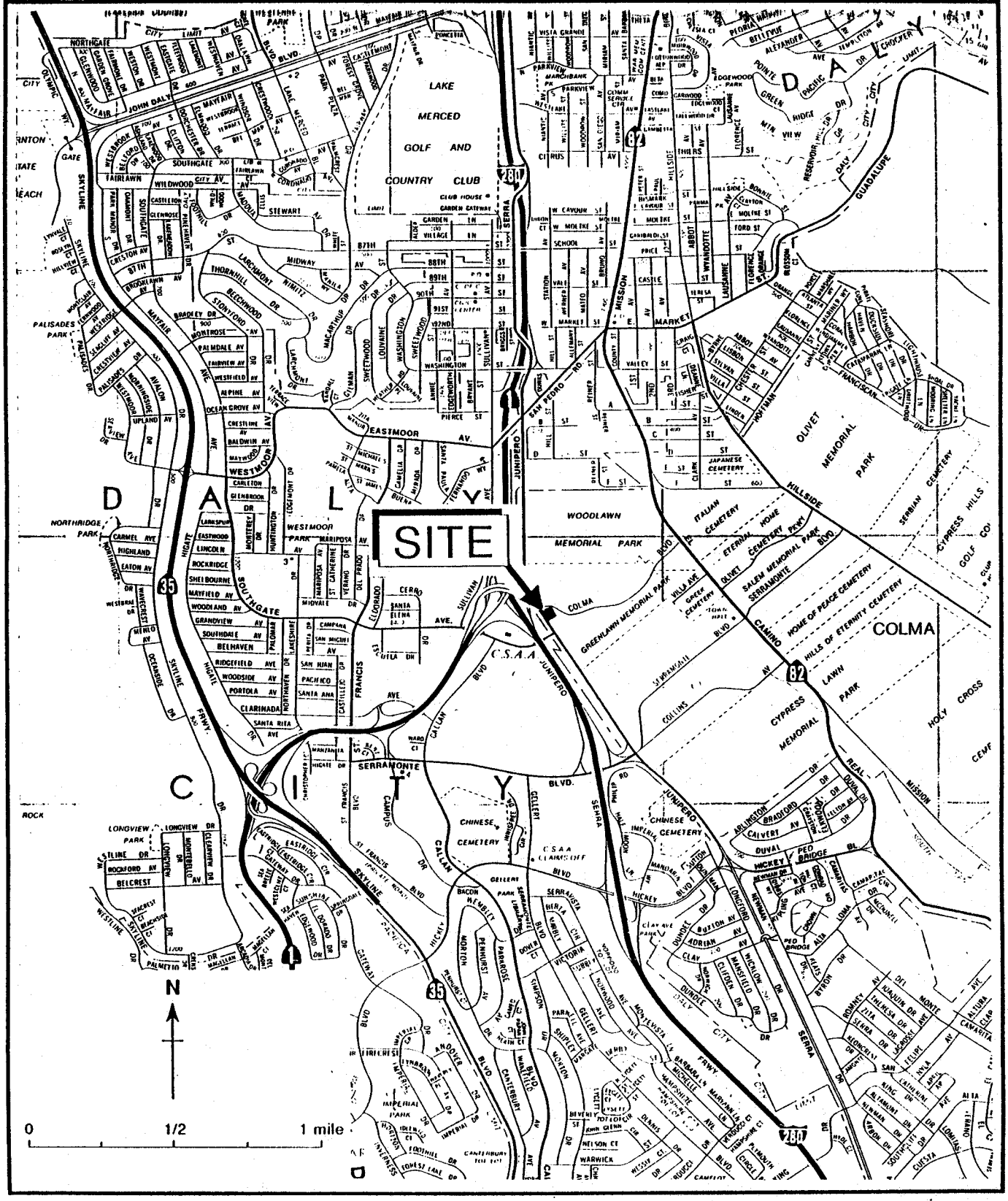

Figure 1. Site Location Map

5/29/91

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

DISCHARGE MONITORING PROGRAM

FOR

BOCCI SCHNEIDER INTERESTS
JUNIPERO SERRA CLASS III SOLID WASTE DISPOSAL SITE
COLMA, SAN MATEO COUNTY

ORDER NO. 96-080

CONSISTS OF

PART A

AND

PART B

PART A

A. GENERAL

Reporting responsibilities of waste dischargers are specified in Sections 13225(a), 13267(b), 13383, and 13387(b) of the California Water Code and this Regional Board's Resolution No. 73-16. This Discharge Monitoring Program is issued in accordance with Provision C.4 of Regional Board Order No. 96-080.

The principal purposes of a discharge monitoring program are:

(1) to document compliance with waste discharge requirements and prohibitions established by the Board,

(2) to facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from waste discharge,

(3) to develop or assist in the development of standards of performance, and toxicity standards,

(4) to assist the discharger in complying with the requirements of Article 5, Chapter 15 as revised July 1, 1991.

B. SAMPLING AND ANALYTICAL METHODS

Sample collection, storage, and analyses shall be performed according to the most recent version of EPA Standard Methods and in accordance with an approved sampling and analysis plan.

Water and waste analysis shall be performed by a laboratory approved for these analyses by the State of California. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and he/she or their authorized representative shall sign all reports of such work submitted to the Regional Board.

All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

C. DEFINITION OF TERMS

1. A grab sample is a discrete sample collected at any time.

2. Receiving waters refers to any surface water which actually or potentially receives surface or groundwater which pass over, through, or under waste materials or contaminated soils.

In this case, the groundwater beneath and adjacent to the landfill areas and the surface runoff from the site are considered receiving waters.

3. Standard observations refer to:

   a. Receiving Waters

      1) Floating and suspended materials of waste origin: presence or absence, source, and size of affected area.
      2) Discoloration and turbidity: description of color, source, and size of affected area.
      3) Evidence of odors, presence or absence, characterization, source, and distance of travel from source.
      4) Evidence of beneficial use: presence of water associated wildlife.
      5) Flow rate.
      6) Weather conditions: wind direction and estimated velocity, total precipitation during the previous five days and on the day of observation.

   b. Perimeter of the waste management unit

      1) Evidence of liquid leaving or entering the waste management unit, estimated size of affected area and flow rate. (Show affected area on a map.)
      2) Evidence of odors, presence or absence, characterization, source, and distance of travel from source.
      3) Evidence of erosion and/or daylighted refuse.

   c. The waste management unit

      1) Evidence of ponded water at any point on the waste management facility.
      2) Evidence of odors, presence or absence, characterization, source, and distance of travel from source
      3) Evidence of erosion and/or daylighted refuse.
      4) Standard Analysis (SA) and measurements are listed on Table 2 (attached).

D. SAMPLING, ANALYSIS, AND OBSERVATIONS

The discharger is required to perform sampling, analyses, and observations in the following media:

1. Groundwater per Section 2550.7(b)
2. Surface water per Section 2550.7(c) and per the general requirements specified in Section 2550.7(e) of Article 5, Chapter 15 and
3. Vadose zone per Section 2550.7(d). This item is neither feasible nor applicable for this landfill.

E. RECORDS TO BE MAINTAINED

Written reports shall be maintained by the discharger or laboratory, and shall be retained for a minimum of five years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Board. Such records shall show the following for each sample:

1. Identity of sample and sample station number.

2. Date and time of sampling.

3. Date and time of analyses, and name of the personal performing the analyses.

4. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used where applicable; or reference to standard EPA methods.

5. Calculation of results.

6. Results of analyses, and detection limits for each analysis.

F. REPORTS TO BE FILED WITH THE BOARD

1. Written detection monitoring reports shall be filed by the 15th day of the month following the report period. In addition, an annual report shall be filed as indicated in F.3 below. The reports shall be comprised of the following:

   a. Letter of Transmittal

      A letter transmitting the essential points in each report should accompany each report. Such a letter shall include a discussion of any requirement violations found during the last report period, and actions taken or planned for correcting the violations. If the discharger has previously submitted a detailed time schedule for correcting requirement violations, a reference to the correspondence transmitting such schedule will be satisfactory. If no violations have occurred in the last report period, this shall be stated in the letter of transmittal. Monitoring reports and the letter transmitting the monitoring reports shall be signed by a principal executive officer at the level of vice president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates. The letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge, the report is true, complete, and correct.

   b. Each monitoring report shall include a compliance evaluation summary. The summary

shall contain:

1) A graphic description of the velocity and direction of groundwater flow under/around the waste management unit, based upon the past and present water level elevations and pertinent visual observations. A statistical evaluation of the water quality monitoring data for all groundwater compliance points (As required under Part B.Table 1).

2) The method and time of water level measurement, the type of pump used for purging, pump placement in the well; method of purging, pumping rate, equipment and methods used to monitor field PH, temperature, and conductivity during purging, calibration of the field equipment, results of the PH, temperature conductivity and turbidity testing, well recovery time, and method of disposing of the purge water.

3) Type of pump used, pump placement for sampling, a detailed description of the sampling procedure; number and description of equipment, field and travel blanks; number and description of duplicate samples; type of sample containers and preservatives used, the date and time of sampling, the name and qualification of the person actually taking the samples, and any other observations.

c. A map or aerial photograph shall accompany each report showing observation and monitoring station locations.

d. Laboratory statements of results of analyses specified in Part B must be included in each report. The director of the laboratory whose name appears on the laboratory certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Board.

1) The methods of analyses and detection limits must be appropriate for the expected concentrations. Specific methods of analyses must be identified. If methods other than EPA approved methods or Standard Methods are used, the exact methodology must be submitted for review and approval by the Executive Officer prior to use.

2) In addition to the results of the analyses, laboratory quality assurance/quality control (QA/QC) information must be included in the monitoring report. The laboratory QA/QC information should include the method, equipment and analytical detection limits; the recovery rates; and explanation for any recovery rate that is outside of the normal range specified by the EPA for that method; the results of equipment and method blanks; the results of spiked and surrogate samples; the frequency of quality control analysis; and the name of the person(s) performing the analyses.

e. An evaluation of the effectiveness of the leachate monitoring or control facilities, which includes an evaluation of leachate buildup within the disposal units, a summary of leachate volumes removed from the units, and a discussion of the leachate disposal methods utilized.

f. A summary and certification of completion of all standard observations for the waste management unit, the perimeter of the waste management unit, and the receiving waters.

g. The quantity and types of wastes disposed of during the past quarter, and the locations of the disposal operations.

2. CONTINGENCY REPORTING

a. A report shall be made by telephone of any seepage from the disposal area immediately after it is discovered. A written report shall be filed with the Board within five days thereafter. This report shall contain the following information:

1) a map showing the location(s) of discharge;
2) approximate flow rate;
3) nature of effects; i.e., all pertinent observations and analyses; and
4) corrective measures underway or proposed.

b. A report shall be made in writing to the Board within seven days of determining that a statistically significant increase occurred at a point of compliance (between a down gradient sample and a WQPS). Notification shall indicate what WQPS(s) has/have been exceeded. The discharger shall immediately re-sample at the compliance point where this difference has been found and reanalyze.

c. If re-sampling and analysis confirms the earlier finding of a statistically significant increase between monitoring results and WQPS(s), the discharger must submit to the Board an amended Report of Waste Discharge as specified in Section 2550.8(k)(5) for establishment of an Evaluation Monitoring Program (EMP) meeting the requirements of Section 2550.9 of Chapter 15.

d. Within 180 days of determining statistically significant evidence of a release, submit to the regional board an engineering feasibility study for a Corrective Action Program (CAP) necessary to meet the requirements of Section 2550.10. At a minimum, the feasibility study shall contain a detailed description of the corrective action measures that could be taken to achieve background concentrations for all constituents of concern.

3. REPORTING

By April 30 of each year, the discharger shall submit an annual report to the Board covering the previous calendar year. This report shall contain:

a. Tabular and graphical summaries of the monitoring data obtained during the previous year; the report should be accompanied by a 5-1/4" or 3-1/2" computer data disk, MS-DOS ASCII format, tabulating the year's data.

b. A comprehensive discussion of the compliance record, and the corrective actions taken or planned which may be needed to bring the discharger into full compliance with the waste discharge requirements.

c. A written summary of the groundwater analyses indicating any change in the quality of the groundwater

d. An evaluation of the effectiveness of the leachate monitoring/control facilities, which includes an evaluation of leachate buildup within the disposal units, a summary of leachate volumes removed from the units, and a discussion of the leachate disposal methods utilized.

4. WELL LOGS

A boring log and a monitoring well construction log shall be submitted for each new sampling well established for this monitoring program, as well as a report of inspection or certification that each well has been constructed in accordance with the construction standards of the Department of Water Resources. These shall be submitted within 30 days after well installation.

PART B

1. DESCRIPTION OF OBSERVATION STATIONS AND SCHEDULE OF OBSERVATIONS

A. ON-SITE OBSERVATIONS - Report Semi-annually

STATION	DESCRIPTION	OBSERVATIONS	FREQUENCY
V-1 thru V-'n'	Located on the waste disposal area as deli-neated by a 500 foot grid network.	Standard observations for the waste management unit.	Semi-annually
P-1 thru P-'n' (perim-eter)	Located at equidistant intervals not exceeding 1000 feet around the perimeter of the waste management unit.	Standard observations for the waste management unit perimeter.	Semi-annually

A map showing visual and perimeter compliance points (V and P stations) shall be submitted by the discharger in the semi-annually monitoring report.

B. GROUNDWATER, LEACHATE AND SURFACE WATER MONITORING

Report Semi-annually

Groundwater, surface water and seepage monitoring points shall be monitored as outlined below on Table 1 and Table 2 and Figure 1 (Attached).

TABLE 1

Monitoring Points For Each Monitoring Medium.:

MONITORING MEDIA	COMPLIANCE POINTS	UPGRADIENT POINTS
Groundwater	MW-1 AND MW-2	MW-3
Seepage	Landfill's perimeter must be inspected for any seepage occurrence on a quarterly basis, and detection of any seepage must be reported immediately to the Board.	

C. FACILITIES MONITORING

The discharger shall inspect all facilities to ensure proper and safe operation once per quarter and report quarterly. The facilities to be monitored shall include, but not be limited to:

a. Surface water monitoring points;
b. Shallow and deep groundwater monitoring wells;
c. Perimeter diversion channels.

I, Loretta K. Barsamian Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedures set forth in this Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in this Board's Order No. 96-080.
2. Is effective on the date shown below.
3. May be reviewed or modified at any time subsequent to the effective date, upon written notice from the Executive Officer.

Loretta K. Barsamian
Executive Officer

Date Ordered: June 19, 1996

Figure 1 - Monitoring Points Location map
Table 2 - Discharge Monitoring Plan

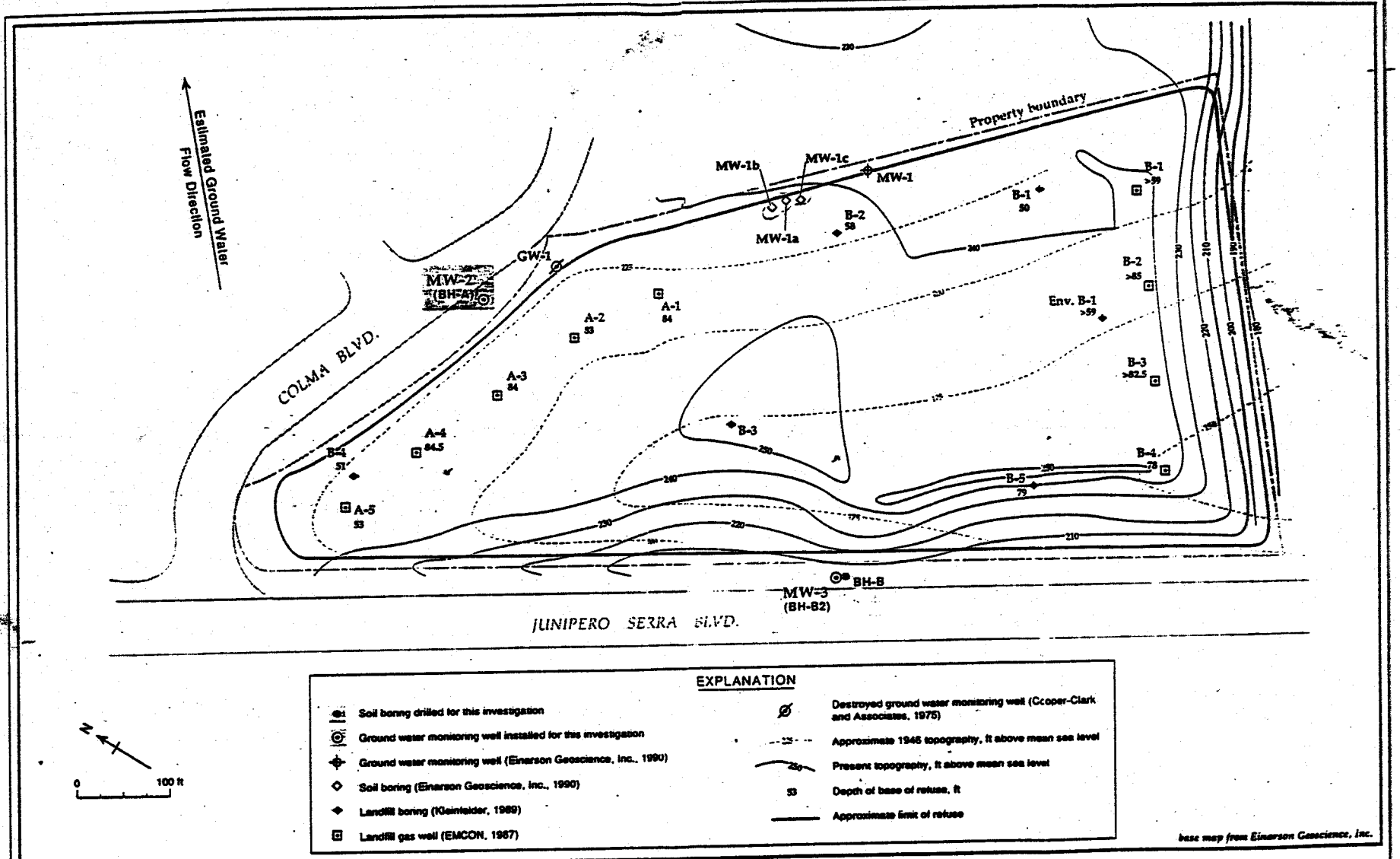

Figure 1- Monitoring Points Location Map

12/11/91

Table 2 - Discharge Monitoring Plan, List of Analytical Parameters

Junipero Serra Landfill
City of Colma
San Mateo County

Parameter	Medium	Method	Frequency[4]	Reference
Water Level Measurements	GW	Field	Once in Spring - Annually	
Temperature Measurements	GW	Field	Once in Spring - Annually	
Electrical Conductivity	GW	Field	Once in Spring - Annually	3
pH	GW	Field	Once in Spring - Annually	3
Total Kjeldahl Nitrogen	GW	351.2	Once in Spring - Annually	3
Turbidity	GW	Field	Once in Spring - Annually	3
Ammonia as N (non--ionized)	GW	350.1	Once in Spring - Annually	3
Chemical Oxygen Demand	GW	410.4	Once in Spring - Annually	3
Total Organic Carbon	GW	415.1	Once in Spring - Annually	3
Total Dissolved Solids	GW	160.1	Once in Spring - Annually	3
VOCs (Appendix I)	GW	8260	Once in 5 years	3
SMVOCs (Appendix II)	GW	8270	once in 5 years	3
Arsenic	GW	7061	Once in Spring - Annually	3
Barium	GW	6010	Once in Spring - Annually	3
Cadmium	GW	7131	Once in Spring - Annually	3
Chromium	GW	6010	Once in Spring - Annually	3
Copper	GW	6010	Once in Spring - Annually	3
Lead	GW	7421	Once in Spring - Annually	3
Mercury	GW	7471	Once in Spring - Annually	3
Nickel	GW	7520	Once in Spring - Annually	3

Parameter	Medium	Method	Frequency[4]	Reference
Selenium	GW	7741	Once in Spring - Annually	3
Silver	GW	6010	Once in Spring - Annually	3
Cyanide	GW	9010	Once in Spring -Once in Spring -Annually	3
Zinc	GW	6010	Once in Spring - Annually	3

NOTES:

1. Not Applicable
2. Methods for Chemical Analysis of Water and Wastes, EPA600/4/79/029, revised March 1983
3. EPA SW-846
4. Spring Reporting Period: Samples to be collected between February 1 and March 31, Annually and report will be due by April 30 [Annual Summary Report].
5. Once every 5 yrs beginning with the Spring Reporting Period report due by April 30, 1997.
6. Monitoring Media: GW=groundwater
7. Alternative EPA-approved methods may be substituted for the above methods provided the alternative methods provide detection limits that are equal to or less than those attainable by the indicated method.
8. Metals samples shall be field filtered using a 0.45 micron filter.